

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	3	"60222450"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/15 09:00
L2	88	"5663396"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/15 09:01
L3	2	"5663396".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/15 09:02
L4	2	"5633396".pn.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/15 09:16
L5	269	560/347.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/15 09:35
L6	109	lysine adj triisocyanate	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/15 09:17
L7	0	I5 and I6	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/15 09:17
L8	59360	activated adj carbon	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/15 09:17
L9	0	I6 and I8	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/15 09:17
L10	30353	phosgene or COCl2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/15 09:35
L11	161	I5 and I10	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/03/15 09:35

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TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	DEC 05	CASREACT(R) - Over 10 million reactions available
NEWS	4	DEC 14	2006 MeSH terms loaded in MEDLINE/LMEDLINE
NEWS	5	DEC 14	2006 MeSH terms loaded for MEDLINE file segment of TOXCENTER
NEWS	6	DEC 14	CA/CAPLUS to be enhanced with updated IPC codes
NEWS	7	DEC 21	IPC search and display fields enhanced in CA/CAPLUS with the IPC reform
NEWS	8	DEC 23	New IPC8 SEARCH, DISPLAY, and SELECT fields in USPATFULL/USPAT2
NEWS	9	JAN 13	IPC 8 searching in IFIPAT, IFIUIDB, and IFICDB
NEWS	10	JAN 13	New IPC 8 SEARCH, DISPLAY, and SELECT enhancements added to INPADOC
NEWS	11	JAN 17	Pre-1988 INPI data added to MARPAT
NEWS	12	JAN 17	IPC 8 in the WPI family of databases including WPIFV
NEWS	13	JAN 30	Saved answer limit increased
NEWS	14	JAN 31	Monthly current-awareness alert (SDI) frequency added to TULSA
NEWS	15	FEB 21	STN AnaVist, Version 1.1, lets you share your STN AnaVist visualization results
NEWS	16	FEB 22	Status of current WO (PCT) information on STN
NEWS	17	FEB 22	The IPC thesaurus added to additional patent databases on STN
NEWS	18	FEB 22	Updates in EPFULL; IPC 8 enhancements added
NEWS	19	FEB 27	New STN AnaVist pricing effective March 1, 2006
NEWS	20	FEB 28	MEDLINE/LMEDLINE reload improves functionality
NEWS	21	FEB 28	TOXCENTER reloaded with enhancements
NEWS	22	FEB 28	REGISTRY/ZREGISTRY enhanced with more experimental spectral property data
NEWS	23	MAR 01	INSPEC reloaded and enhanced
NEWS	24	MAR 03	Updates in PATDPA; addition of IPC 8 data without attributes
NEWS	25	MAR 08	X.25 communication option no longer available after June 2006
NEWS	EXPRESS		FEBRUARY 15 CURRENT VERSION FOR WINDOWS IS V8.01a, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 19 DECEMBER 2005. V8.0 AND V8.01 USERS CAN OBTAIN THE UPGRADE TO V8.01a AT <a href="http://download.cas.org/express/v8.0-Discover/">http://download.cas.org/express/v8.0-Discover/</a>
NEWS	HOURS		STN Operating Hours Plus Help Desk Availability
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NEWS	LOGIN		Welcome Banner and News Items
NEWS	PHONE		Direct Dial and Telecommunication Network Access to STN
NEWS	WWW		CAS World Wide Web Site (general information)

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\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 07:39:58 ON 15 MAR 2006

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 07:40:09 ON 15 MAR 2006

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 13 MAR 2006 HIGHEST RN 876655-59-3

DICTIONARY FILE UPDATES: 13 MAR 2006 HIGHEST RN 876655-59-3

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TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

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\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
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\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> e lysine triisocyanate/cn

E1	1	LYSINE TRANSPORTER (SHIGELLA BOYDII STRAIN K-694 GENE LYSP F RAGMENT)/CN
E2	1	LYSINE TRANSPORTERS/CN
E3	1 -->	LYSINE TRIISOCYANATE/CN
E4	1	LYSINE TRIISOCYANATE-DURANATE TPA 100-HITALOID 3083-70B COPOLYMER/CN
E5	1	LYSINE TRIISOCYANATE-STYRENE BLOCK COPOLYMER/CN
E6	1	LYSINE TRNA SYNTHETASE (CITROBACTER FREUNDII STRAIN BALLERUP -7851 GENE LYSU)/CN
E7	1	LYSINE TRNA SYNTHETASE (ESCHERICHIA COLI STRAIN O157:H7 GENE

ECS5111)/CN  
 E8 1 LYSINE TRNA SYNTHETASE (SHIGELLA FLEXNERI STRAIN 2457T GENE LYSS)/CN  
 E9 1 LYSINE TRNA SYNTHETASE (YERSINIA PESTIS STRAIN KIM GENE LYSS)/CN  
 E10 1 LYSINE TRNA SYNTHETASE, CONSTITUTIVE (SALMONELLA ENTERICA ENTERICA CHOLERAESUIS STRAIN SC-B67 GENE LYSS)/CN  
 E11 1 LYSINE TRNA SYNTHETASE, CONSTITUTIVE (SALMONELLA ENTERICA TY PHIMURIUM STRAIN LT2; SGSC 1412; ATCC 700720 GENE LYSS)/CN  
 E12 1 LYSINE TRNA SYNTHETASE, CONSTITUTIVE (SHIGELLA BOYDII STRAIN SB227 GENE LYSS)/CN

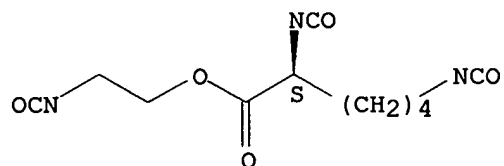
=> e3

L1 1 "LYSINE TRIISOCYANATE"/CN

=> d 11

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN  
 RN 77704-50-8 REGISTRY  
 ED Entered STN: 16 Nov 1984  
 CN Hexanoic acid, 2,6-diisocyanato-, 2-isocyanatoethyl ester, (2S)- (9CI)  
 (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Hexanoic acid, 2,6-diisocyanato-, 2-isocyanatoethyl ester, (S)-  
 OTHER NAMES:  
 CN **Lysine triisocyanate**  
 FS STEREOSEARCH  
 MF C11 H13 N3 O5  
 CI COM  
 LC STN Files: CA, CAPLUS, CASREACT, CIN, PIRA, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

28 REFERENCES IN FILE CA (1907 TO DATE)  
 14 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 28 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	8.42	8.63

FILE 'CAPLUS' ENTERED AT 07:42:27 ON 15 MAR 2006  
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FILE LAST UPDATED: 14 Mar 2006 (20060314/ED)

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=> l1  
L2 28 L1

=> save temp l2 lystriiso/a  
ANSWER SET L2 HAS BEEN SAVED AS 'LYSTRIISO/A'

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.92	9.55

SESSION WILL BE HELD FOR 60 MINUTES  
STN INTERNATIONAL SESSION SUSPENDED AT 07:43:27 ON 15 MAR 2006

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LOGINID:SSSPTA1623PAZ

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\* \* \* \* \* RECONNECTED TO STN INTERNATIONAL \* \* \* \* \*  
SESSION RESUMED IN FILE 'CAPLUS' AT 08:29:58 ON 15 MAR 2006  
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FULL ESTIMATED COST	0.92	9.55

=> d his

(FILE 'HOME' ENTERED AT 07:39:58 ON 15 MAR 2006)

FILE 'REGISTRY' ENTERED AT 07:40:09 ON 15 MAR 2006  
E LYSINE TRIISOCYANATE/CN

L1 1 E3

FILE 'CAPLUS' ENTERED AT 07:42:27 ON 15 MAR 2006

L2 28 L1  
SAVE TEMP L2 LYSTRIISO/A

=> carbon  
1177471 CARBON  
25740 CARBONS

L3 1186698 CARBON.  
(CARBON OR CARBONS)

=> l2 and l3

L4 3 L2 AND L3

=> d l4 1-3 ti

L4 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Fluoropolymers, their manufacture, their compositions, their coatings and  
varnish with high gloss and hardness and good water and oil resistance,  
and laminates coated with them

L4 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Moisture-curable urethane compositions with low foaming and good adhesion  
to substrate surface without the needs for a primer

L4 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN  
TI One-liquid moisture-curable polyurethane compositions with good adhesion  
and curability

=> activatred carbon  
3 ACTIVATRED  
1177471 CARBON  
25740 CARBONS  
1186698 CARBON

(CARBON OR CARBONS)  
L5 0 ACTIVATRED CARBON  
(ACTIVATRED(W) CARBON)

=> activated carbon  
'CARBON' MUST END IN '/Q', '/A', '/L', '/S', OR '/B'  
The name of a saved query (or structure or screen set) ends in '/Q'.  
The name of a saved answer set ends in '/A'. The name of a saved L#  
list ends in '/L'. The name of an SDI request ends in '/S'. The name  
of a BATCH search request ends in '/B'. You must enter the /Q, /A,  
/L, /S, or /B at the end of the name.  
ENTER NAME OF SAVED ITEM TO ACTIVATE OR (END):end

=> search activated carbon  
485902 ACTIVATED  
1177471 CARBON  
25740 CARBONS  
1186698 CARBON  
(CARBON OR CARBONS)  
L6 45301 ACTIVATED CARBON  
(ACTIVATED(W) CARBON)

=> l2 and l6

L7 0 L2 AND L6

=> d l4 1-3 ti fbib abs

L4 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Fluoropolymers, their manufacture, their compositions, their coatings and  
varnish with high gloss and hardness and good water and oil resistance,  
and laminates coated with them  
AN 2005:275812 CAPLUS  
DN 142:337900  
TI Fluoropolymers, their manufacture, their compositions, their coatings and  
varnish with high gloss and hardness and good water and oil resistance,  
and laminates coated with them

IN Kimura, Sachiyo; Matsuda, Yoshitaka; Obayashi, Nobuo; Katayama, Mitsuhiro  
PA Kanto Denka Kogyo Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 15 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005082719	A2	20050331	JP 2003-317088	20030909
				JP 2003-317088	20030909

AB The fluoropolymers comprise fluoroolefins, perfluoroalkyl-containing monomers, OH-containing unsatd. monomers, dicyclopentanyl- and/or dicyclopentenyl-containing (meth)acrylates, and optionally reactive siloxanes. Thus, dicyclopentanyl methacrylate-hydroxybutylvinyl ether-Me methacrylate-2-perfluorooctylethyl methacrylate-tetrafluoroethylene copolymer was reacted with lysine triisocyanate to give a coating layer showing 60° gloss 89, pencil hardness (JIS K 5600) 2H, and good adhesion between the layers.

L4 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Moisture-curable urethane compositions with low foaming and good adhesion to substrate surface without the needs for a primer  
AN 2001:910277 CAPLUS  
DN 136:54557

TI Moisture-curable urethane compositions with low foaming and good adhesion to substrate surface without the needs for a primer

IN Araki, Kiminori; Miyata, Akihiro; Ishikawa, Kazunori  
PA Yokohama Rubber Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 16 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001348416	A2	20011218	JP 2000-170754	20000607
				JP 2000-170754	20000607

OS MARPAT 136:54557

AB The compns. useful for adhesives, sealants, etc., comprise (A) urethane prepolymers, (B) the silane compds. either derived from the reaction of an adduct of diisocyanate compound and a compound bearing  $\geq 3$  reactive H's or a lysine isocyanate bearing 2 or 3 NCO groups with secondary aminoalkoxysilane compound bearing N-substituted benzene ring or its derivative,

(C) tertiary amine catalysts bearing morpholino structure or/and dimethylamino structure and (D) organotin compound. Thus, preparing a urethane prepolymer (A) from a polyoxypropylene diol (mol. weight 2000) 500, a polyoxypropylene triol (mol. weight 5000) 750 and MDI 214, sep. preparing an addition reaction product (B) of Takenate D 110N (polyisocyanate) 150 and Y 9669 (3-phenylaminopropyltrimethoxysilane) 18 g, and mixing the A 100 with the B 8.7, BL 19 (tert-amine catalyst) 0.05, dioctyltin dilaurate 0.02, Ph3P 0.1 and carbon black 102 parts gave a moisture-curable urethane composition forming good bonding to metal and glass surfaces.

L4 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN  
TI One-liquid moisture-curable polyurethane compositions with good adhesion and curability  
AN 2000:302165 CAPLUS  
DN 132:323106  
TI One-liquid moisture-curable polyurethane compositions with good adhesion and curability  
IN Miyata, Akihiro; Ishikawa, Kazunori; Araki, Kiminori

PA Yokohama Rubber Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 11 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000128949	A2	20000509	JP 1998-316211	19981106
	JP 3263034	B2	20020304		
				JP 1997-310396	A 19971112
				JP 1998-235194	A 19980821
	US 6133395	A	20001017	US 1998-189622	19981110
				JP 1997-310396	A 19971112
				JP 1998-235194	A 19980821
				JP 1998-316211	A 19981106

AB The compns., useful for sealants, etc., comprise urethane prepolymers and silane compds. having average  $\geq 1.5$  NCO groups and average  $\geq 1.5$  hydrolyzable alkoxy groups in a mol. selected from (A) reaction products of polyol (mol. weight  $\leq 500$ )-diisocyanate adducts having  $\geq 3$  NCO groups with secondary amino alkoxysilanes and (B) adducts of secondary amino alkoxysilanes and lysine isocyanates containing 2-3 NCO groups. Thus, 336 g trimethylolpropane-HDI (1:3) adduct (Coronate HL) was treated with 87 g 3-phenylaminopropyltrimethoxysilane (Y 9669) to give an adduct (NCO 2.00 and hydrolyzable alkoxy group 3.00/mol.), 6.6 g of which was mixed with 100 g polyoxypropylene diol-polyoxypropylene triol-MDI copolymer, **carbon** black, and dioctyltin dilaurate to give a composition, showing good curability at 20° and relative humidity 65%, adhesion to glass and steel plates, strength and elongation for the cured product, and no foaming in curing.

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	22.64	31.27
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-2.25	-2.25

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	ENTRY	SESSION
FULL ESTIMATED COST	22.64	31.27



DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

CA SUBSCRIBER PRICE

ENTRY

SESSION

-2.25

-2.25

=&gt; l1/prep

28 L1  
3437698 PREP/RL  
L8 18 L1/PREP  
(L1 (L) PREP/RL)

=&gt; phosgene

12980 PHOSGENE  
40 PHOSGENES  
L9 12991 PHOSGENE  
(PHOSGENE OR PHOSGENES)

=&gt; 18 and 19

L10 2 L8 AND L9

=&gt; d l10 1-2 ti fbib abs

L10 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN

TI Preparation of lysine ester triisocyanates without discoloration

AN 2002:23511 CAPLUS

DN 136:69598

TI Preparation of lysine ester triisocyanates without discoloration

IN Matsuoka, Toshihiro; Kato, Shigeaki; Matsushita, Seishiro; Fukuda, Yukitoshi

PA Kyowa Oil and Fat Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002003462	A2	20020109	JP 2000-183940	20000620
				JP 2000-183940	20000620

OS CASREACT 136:69598; MARPAT 136:69598

AB The compds.  $\text{OCN}(\text{CH}_2)_4\text{CH}(\text{NCO})\text{CO}_2\text{RNCO}$  (R = alkyl) are prepared by reaction of  $\text{H}_2\text{N}(\text{CH}_2)_4\text{CH}(\text{NH}_2)\text{CO}_2\text{RNH}_2$  (R = alkylene) or their salts with **phosgene**, treatment of the reaction mixture with activated C or metal halides, and distillation Lysine  $\beta$ -aminoethyl ester trihydrochloride was reacted with **phosgene** in o-dichlorobenzene at  $130^\circ$  for 12 h, treated with activated C (Shirasagi P), and distilled to give lysine diisocyanate  $\beta$ -isocyanatoethyl ester with 99% purity and APHA 20.

L10 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN

TI Lysine ester triisocyanates

AN 1986:406815 CAPLUS

DN 105:6815

TI Lysine ester triisocyanates

IN Aiga, Makoto; Torisu, Yasuyoshi; Samejima, Muneyasu; Ajioka, Masanobu

PA Mitsui Toatsu Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

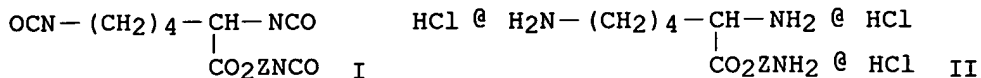
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60222450	A2	19851107	JP 1984-78653	19840420

GI



AB Lysine ester triisocyanates I (Z = alkylene) containing controlled amts. of coloring substances useful for paints were prepared by treating anhydrous lysine monoalkyl ester trihydrochloride (II) with **phosgene** in an unreactive organic solvent, removing the solvent and tarry matters, heating at 100-200°, and distilling. Thus, 111.1 g of a moist mass containing 80% lysine β-aminoethyl ester trihydrochloride (II; Z = C<sub>2</sub>H<sub>4</sub>) (III), 10% MeOH, and 10% H<sub>2</sub>O was mixed with 600 g o-dichlorobenzene (IV) in a mixer 20 min at 200 rpm, filtered, and the filter cake was washed with 600 g IV to give III containing 180 ppm H<sub>2</sub>O, which in 600 g IV was treated with **phosgene** (**phosgene**: amide = 3:1) 10 h at 140° followed by thin film distillation at 180-220°. The reaction mixture was heated 30 min at 180° under N and then distilled at 180-220° and 0.5 mm Hg to give 88.3% lysine diisocyanate β-isocyanatoethyl ester (I; Z = C<sub>2</sub>H<sub>4</sub>) of 99.5% purity and APHA 50.

=&gt;

=&gt; d 18 15-18 ti

L8 ANSWER 15 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN

TI Flexible yellowing-free polyurethane resin for coatings with good chip, scuff, and impact resistance

L8 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN

TI Lysine ester triisocyanates

L8 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN

TI Purification of organic isocyanates

L8 ANSWER 18 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN

TI Polyurethane resins and polyurethane resin coating compositions

=&gt; d 18 16, 17 ti fbib abs

L8 ANSWER 16 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN

TI Lysine ester triisocyanates

AN 1986:406815 CAPLUS

DN 105:6815

TI Lysine ester triisocyanates

IN Aiga, Makoto; Torisu, Yasuyoshi; Samejima, Muneyasu; Ajioka, Masanobu

PA Mitsui Toatsu Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

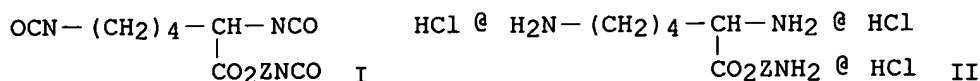
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 60222450	A2	19851107	JP 1984-78653	19840420
	JP 04066863	B4	19921026	JP 1984-78653	19840420

GI



AB Lysine ester triisocyanates I (Z = alkylene) containing controlled amts. of coloring substances useful for paints were prepared by treating anhydrous lysine monoalkyl ester trihydrochloride (II) with phosgene in an unreactive organic solvent, removing the solvent and tarry matters, heating at 100-200°, and distilling. Thus, 111.1 g of a moist mass containing 80% lysine β-aminoethyl ester trihydrochloride (II; Z = C<sub>2</sub>H<sub>4</sub>) (III), 10% MeOH, and 10% H<sub>2</sub>O was mixed with 600 g o-dichlorobenzene (IV) in a mixer 20 min at 200 rpm, filtered, and the filter cake was washed with 600 g IV to give III containing 180 ppm H<sub>2</sub>O, which in 600 g IV was treated with phosgene (phosgene: amide = 3:1) 10 h at 140° followed by thin film distillation at 180-220°. The reaction mixture was heated 30 min at 180° under N and then distilled at 180-220° and 0.5 mm Hg to give 88.3% lysine diisocyanate β-isocyanatoethyl ester (I; Z = C<sub>2</sub>H<sub>4</sub>) of 99.5% purity and APHA 50.

L8 ANSWER 17 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Purification of organic isocyanates  
AN 1985:455701 CAPLUS  
DN 103:55701  
TI Purification of organic isocyanates  
PA Mitsui Toatsu Chemicals, Inc., Japan  
SO Jpn. Kokai Tokkyo Koho, 4 pp.  
CODEN: JKXXAF

DT Patent  
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	JP 60054349	A2	19850328	JP 1983-161890	19830905
				JP 1983-161890	19830905

AB The diisocyanate (I) [77704-50-8] (95% purity) prepared by the phosgenation of lysine 2-aminoethyl ester with COCl<sub>2</sub> was added (149.7 g) with 35 g heat transfer medium (Nuray N-165 AH) to a thin-film evaporator (224 and 51 g/h, resp.) at 190-210° (wall temperature)/2 mm to give 71.4 g purified I and 106.3 g high-boiling mixture. Nuray (32 g) was recovered, and high-boiling isocyanates (74 g) were recycled to the distillation apparatus with 75.7 g addnl. crude I to give 121 g purified I and recover 31 g Nuray and 29 g high-boiling isocyanates without forming deposits on the apparatus

=> d 18 4-14 ti

L8 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Low-refractive-index urethane (meth)acrylate compositions and optical fiber claddings therefrom

L8 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN  
TI polyisocyanate mixtures as curing agents for high-solids coating compositions with good appearance and impact resistance

L8 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Tackifiers with good storage stability and primer compositions using them

L8 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Preparation of lysine ester triisocyanates without discoloration

L8 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Moisture-curable urethane compositions with low foaming and good adhesion to substrate surface without the needs for a primer

L8 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI (Hydroxyalkyl)cyclohexane group-containing (meth)acrylate copolymers and their compositions giving scratch-resistant self-repairable hard coatings

L8 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Polyisocyanates, their compositions, and fast-drying polyurethane coatings

L8 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Moisture-curable one-component urethane polymer compositions with good adhesion to mortar and aluminum products

L8 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI One-liquid moisture-curable polyurethane compositions with good adhesion and curability

L8 ANSWER 13 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Preparation of active hydrogen compounds-modified polyisocyanates

L8 ANSWER 14 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Manufacture of polymer boards with uniform composition distribution by casting

=> d 18 6,7,10,13 ti fbib abs

L8 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Tackifiers with good storage stability and primer compositions using them  
 AN 2002:129269 CAPLUS  
 DN 136:185441  
 TI Tackifiers with good storage stability and primer compositions using them  
 IN Miyata, Akihiro; Ishikawa, Kazunori; Matsuda, Hideyuki  
 PA Yokohama Rubber Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002053798	A2	20020219	JP 2000-239446	20000808
	US 2002037964	A1	20020328	US 2001-920712	20010803
	US 6765055	B2	20040720		
				JP 2000-239446	A 20000808
AB	Title tackifiers comprise silanes having $\geq 1$ (average) NCO groups and $\geq 1$ (average) hydrolyzable alkoxysilyl groups and are prepared from (A) polyisocyanates and (B) silane coupling agents having secondary amino groups containing N atoms bonded to Ph or its derivs. directly. The primer comps. contain the tackifiers and film-forming polymers. Thus, a composition containing a reaction product of hexamethylene diisocyanate and $\gamma$ -anilinopropyltrimethoxysilane and Gemlac YC 3623 (acrylic polymer) was applied on a float glass sheet to give a test piece showing good water-resistant and low-temperature adhesion.				

L8 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Preparation of lysine ester triisocyanates without discoloration  
 AN 2002:23511 CAPLUS

DN 136:69598  
 TI Preparation of lysine ester triisocyanates without discoloration  
 IN Matsuoka, Toshihiro; Kato, Shigeaki; Matsushita, Seishiro; Fukuda, Yukitoshi  
 PA Kyowa Oil and Fat Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 2002003462	A2	20020109	JP 2000-183940	20000620
				JP 2000-183940	20000620

OS CASREACT 136:69598; MARPAT 136:69598  
 AB The compds. OCN(CH<sub>2</sub>)<sub>4</sub>CH(NCO)CO<sub>2</sub>RNCO (R = alkyl) are prepared by reaction of H<sub>2</sub>N(CH<sub>2</sub>)<sub>4</sub>CH(NH<sub>2</sub>)CO<sub>2</sub>RNH<sub>2</sub> (R = alkylene) or their salts with phosgene, treatment of the reaction mixture with activated C or metal halides, and distillation Lysine β-aminoethyl ester trihydrochloride was reacted with phosgene in o-dichlorobenzene at 130° for 12 h, treated with activated C (Shirasagi P), and distilled to give lysine diisocyanate β-isocyanatoethyl ester with 99% purity and APHA 20.

L8 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Polyisocyanates, their compositions, and fast-drying polyurethane coatings  
 AN 2000:765421 CAPLUS  
 DN 133:336624  
 TI Polyisocyanates, their compositions, and fast-drying polyurethane coatings  
 IN Kaminaga, Hiroshi; Komiyama, Kenji; Tanaka, Kazuaki; Nobuhara, Toshikazu  
 PA Saito K. K., Japan; Kyowa Hakko Kogyo Co., Ltd.; Nippon Soda Co., Ltd.  
 SO Jpn. Kokai Tokkyo Koho, 12 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 2000302745	A2	20001031	JP 1999-223770	19990806
				JP 1999-36534	A 19990215

OS MARPAT 133:336624  
 AB Polyisocyanates are prepared by reaction of lysine triisocyanate (I) with H<sub>2</sub>O. Thus, I was reacted with H<sub>2</sub>O in acetone-MEK-cellosolve acetate mixture to give a biuret product containing 28.9% NCO, which was mixed with acrylic polyol (Hitaloid D 1004) with NCO:OH ratio of 1:1, and applied on a substrate to give coatings showing pencil hardness H after 1 day at room temperature and color difference (ΔE) 0.81 after 60 h exposure to sunshine weather-O-meter.

L8 ANSWER 13 OF 18 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Preparation of active hydrogen compounds-modified polyisocyanates  
 AN 1998:211135 CAPLUS  
 DN 128:257181  
 TI Preparation of active hydrogen compounds-modified polyisocyanates  
 IN Nomura, Satoshi; Gonjo, Hidenori; Furumaki, Kazunari  
 PA Toray Industries, Inc., Japan  
 SO Jpn. Kokai Tokkyo Koho, 3 pp.  
 CODEN: JKXXAF

DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 10087597	A2	19980407	JP 1996-242193	19960912

AB The title compds. are prepared by treatment of polyisocyanates with active H-containing compds. in the presence of alkali metals, alkaline earth metals, and/or their compds. at  $\leq 1$  ppm. This method is useful in modification of polyisocyanates with  $\geq 2$  compds. without causing dimerization or trimerization of the isocyanates. Lysine triisocyanate was treated with 2-hydroxyethyl methacrylate and K-containing OH-modified poly(dimethylsiloxane), then mixed with trifluoroethyl methacrylate to give a transparent solution

=> isocyanate

63312 ISOCYANATE  
21381 ISOCYANATES  
L11 71650 ISOCYANATE  
(ISOCYANATE OR ISOCYANATES)

=> d his

(FILE 'HOME' ENTERED AT 07:39:58 ON 15 MAR 2006)

FILE 'REGISTRY' ENTERED AT 07:40:09 ON 15 MAR 2006  
E LYSINE TRIISOCYANATE/CN

L1 1 E3

FILE 'CAPLUS' ENTERED AT 07:42:27 ON 15 MAR 2006

L2 28 L1  
SAVE TEMP L2 LYSTRISO/A  
L3 1186698 CARBON  
L4 3 L2 AND L3  
L5 0 ACTIVATRED CARBON  
L6 45301 SEARCH ACTIVATED CARBON  
L7 0 L2 AND L6  
L8 18 L1/PREP  
L9 12991 PHOSGENE  
L10 2 L8 AND L9  
L11 71650 ISOCYANATE

=> 16(1)111

L12 25 L6(L)L11

=> d 112 15-25 ti

L12 ANSWER 15 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Determining VOC adsorption capacity

L12 ANSWER 16 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Preparation of carbonate esters

L12 ANSWER 17 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Asphalt-polyurethane sealant

L12 ANSWER 18 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Adsorptive removal of isocyanates from waste gases

L12 ANSWER 19 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Bearing linings

L12 ANSWER 20 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Organic and inorganic composite foams

L12 ANSWER 21 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Polyisocyanates from polycarbamates

L12 ANSWER 22 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Selective adsorbents useful as dialysis membrane substitutes

L12 ANSWER 23 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Cross-linking agents for polymers containing halogen

L12 ANSWER 24 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Polyurethan elastomers having increased pot life

L12 ANSWER 25 OF 25 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Polyurethan manufacture

=> purif?

L13 792841 PURIF?

=> 112(1)113

L14 2 L12(L)113

=> d 114 1-2 ti

L14 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Apparatus for recirculation and purification bathtub water using activated carbon and sodium dichloroisocyanate

L14 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Polyurethan manufacture

=> d 114 1-2 ti fbib abs

L14 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Apparatus for recirculation and purification bathtub water using activated carbon and sodium dichloroisocyanate

AN 1999:480894 CAPLUS

DN 131:106564

TI Apparatus for recirculation and purification bathtub water using activated carbon and sodium dichloroisocyanate

IN Takahashi, Mitsutaka; Nakatsugawa, Naoki; Fukuda, Masahiko; Okajima, Rumi; Morikawa, Akira

PA Mitsubishi Electric Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11207360	A2	19990803	JP 1998-16724	19980129
				JP 1998-16724	19980129

AB The apparatus includes a recirculation loop with a purification tank filled with activated carbon having surface area  $6 \times 10^5$ - $2 \times 10^6$  m<sup>2</sup>, and a means for releasing sodium dichloroisocyanate as purification agent into the water, at a ratio of surface area to releasing amount being  $(1.1-4.5) \times 10^6$  m<sup>2</sup>/g, for disinfection.

L14 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN

TI Polyurethan manufacture

AN 1966:105433 CAPLUS

DN 64:105433

OREF 64:19928b-f

TI Polyurethan manufacture  
 IN Aitken, Roxburgh R.; Green, William  
 PA Imperial Chemical Industries Ltd.  
 SO 7 pp.  
 DT Patent  
 LA Unavailable  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1025242		19660406	GB	19621102
AB	<p>Polyurethans which are relatively unaffected by high humidity and which are suitable for manufacture of foams having a high resistance to compression are prepared by treating an OH-containing block copolymer of ethylene and 1,2-propylene oxides, having an oxyethylene content of 0.1-7% by weight, with a polyisocyanate. The latter may be either a product obtained by treating tolylene diisocyanate with less than a stoichiometric equivalent of at least one polyol having a mol. weight <math>\leq 1000</math>, or alternatively a composition comprising a major proportion of a diarylmethane diisocyanate and from 5 to 50% by weight of a polyisocyanate with a functionality <math>&gt;2</math>. Suitable diarylmethane diisocyanates are diphenylmethane diisocyanate and phenyltolylmethane diisocyanate. A polyisocyanate with a functionality <math>&gt;2</math> may be directly added to the diarylmethane diisocyanate or such a compound may be prepared by treating the latter with a polyol or by partially polymerizing the latter or as by products of the manufacture of diarylmethane diisocyanate by phosgenation of diaryldiaminomethane. Thus, a block copolymer is obtained by first polymerizing propylene oxide to a mol. weight 4750 at 45-55 psig. at <math>125^\circ</math> in the presence of glycerol and KOH. Ethylene oxide (200 parts) is then added and the mixture is heated to <math>100-10^\circ</math> under the autogeneous pressure generated. The crude product is <b>purified</b> by heating and stirring at 20 mm. for 1 hr. followed by neutralization with adipic acid in the presence of Filtecel, <b>activated carbon</b>, and 2-(<math>\alpha</math>-methylcyclohexyl)-4,6-dimethylphenol. The product has an OH value of 33.3 mg. KOH/g., a water content of 0.06%, and an acid value of 0.11 mg. KOH/g., and contains 5% ethylene oxide residues. A polyisocyanate is prepared by treating 4.5 equivalent (based on combined OH and acid values of polyester) of 80:20 2,4- and 2,6-tolyene diisocyanate with a polyester of OH value 650 mg. KOH/g. and acid value <math>&lt;2</math> mg. KOH/g. obtained by condensing 8 moles of trimethylolpropane, 1 mole of pentaerythritol, and 4 moles adipic acid. The product contains 30% by weight of free <b>isocyanate</b> groups. Foams are obtained by treating the block copolymer with the <b>isocyanate</b>.</p>				

=> d his

(FILE 'HOME' ENTERED AT 07:39:58 ON 15 MAR 2006)

FILE 'REGISTRY' ENTERED AT 07:40:09 ON 15 MAR 2006

E LYSINE TRIISOCYANATE/CN

L1 1 E3

FILE 'CAPLUS' ENTERED AT 07:42:27 ON 15 MAR 2006

L2 28 L1

SAVE TEMP L2 LYSTRISO/A

L3 1186698 CARBON

L4 3 L2 AND L3

L5 0 ACTIVATRED CARBON

L6 45301 SEARCH ACTIVATED CARBON

L7 0 L2 AND L6

L8 18 L1/PREP

L9 12991 PHOSGENE

L10 2 L8 AND L9



L11 71650 ISOCYANATE  
L12 25 L6(L)L11  
L13 792841 PURIF?  
L14 2 L12(L)L13

=> 16 and 111

L15 45 L6 AND L11

=> 113 and 115

L16 8 L13 AND L15

=> d 116 1-8 ti

L16 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Use of starch, including modified and insoluble starch, for the  
elimination of natural organic substances from liquids

L16 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Copolyether and process for production thereof

L16 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Preparation of polycyclodextrin as water **purification** adsorbent

L16 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Functional Dendrimeric "Nanosponges" for the Removal of Polycyclic  
Aromatic Hydrocarbons from Water

L16 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Apparatus for recirculation and **purification** bathtub water using  
**activated carbon** and sodium dichloroisocyanate

L16 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Separating **isocyanates** from gases and vapors

L16 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Polyurethan elastomers having increased pot life

L16 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Polyurethan manufacture

=> d 116n6-8 ti fbib abs

'L16N6-8' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats:

ABS ----- GI and AB  
ALL ----- BIB, AB, IND, RE  
APPS ----- AI, PRAI  
BIB ----- AN, plus Bibliographic Data and PI table (default)  
CAN ----- List of CA abstract numbers without answer numbers  
CBIB ----- AN, plus Compressed Bibliographic Data  
CLASS ----- IPC, NCL, ECLA, FTERM  
DALL ----- ALL, delimited (end of each field identified)  
DMAX ----- MAX, delimited for post-processing  
FAM ----- AN, PI and PRAI in table, plus Patent Family data  
FBIB ----- AN, BIB, plus Patent FAM  
IND ----- Indexing data  
IPC ----- International Patent Classifications  
MAX ----- ALL, plus Patent FAM, RE  
PATS ----- PI, SO  
SAM ----- CC, SX, TI, ST, IT  
SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;

SCAN must be entered on the same line as the DISPLAY,  
e.g., D SCAN or DISPLAY SCAN)

STD ----- BIB, CLASS

IABS ----- ABS, indented with text labels  
 IALL ----- ALL, indented with text labels  
 IBIB ----- BIB, indented with text labels  
 IMAX ----- MAX, indented with text labels  
 ISTD ----- STD, indented with text labels

OBIB ----- AN, plus Bibliographic Data (original)  
 OIBIB ----- OBIB, indented with text labels

SBIB ----- BIB, no citations  
 SIBIB ----- IBIB, no citations

HIT ----- Fields containing hit terms  
 HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)  
                   containing hit terms  
 HITRN ----- HIT RN and its text modification  
 HITSTR ----- HIT RN, its text modification, its CA index name, and  
                   its structure diagram  
 HITSEQ ----- HIT RN, its text modification, its CA index name, its  
                   structure diagram, plus NTE and SEQ fields  
 FHITSTR ----- First HIT RN, its text modification, its CA index name, and  
                   its structure diagram  
 FHITSEQ ----- First HIT RN, its text modification, its CA index name, its  
                   structure diagram, plus NTE and SEQ fields  
 KWIC ----- Hit term plus 20 words on either side  
 OCC ----- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field codes. For a list of the display field codes, enter HELP DFIELDS at an arrow prompt (=>). Examples of formats include: TI; TI,AU; BIB,ST; TI,IND; TI,SO. You may specify the format fields in any order and the information will be displayed in the same order as the format specification.

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ENTER DISPLAY FORMAT (BIB):end

=> d 116 6-8 ti fbib abs

L16 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
 TI Separating **isocyanates** from gases and vapors  
 AN 1977:33691 CAPLUS  
 DN 86:33691  
 TI Separating **isocyanates** from gases and vapors  
 IN Maegerlein, Helmut; Meyer, Gerhard; Rupp, Hans D.; Klug, Walter  
 PA Akzo G.m.b.H., Fed. Rep. Ger.  
 SO Ger. Offen., 16 pp.  
       CODEN: GWXXBX  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	DE 2436781	A1	19760212	DE 1974-2436781	19740731
				A	
	FR 2280418	A1	19760227	FR 1975-22589	19750718
				DE 1974-2436781	A 19740731

AB Mono- and/or diisocyanates are removed from gases, without formation of  
insol. ureas, by hydrolysis with dilute aqueous alkalis or mineral acids in  
the presence of active charcoal and/or Al<sub>2</sub>O<sub>3</sub>. Thus, offgas containing 1500 mg/m<sup>3</sup>  
hexamethylene diisocyanate (I) [822-06-0] and 13 g/m<sup>3</sup> toluene [108-88-3]  
is passed at 20 cm/s with 100 ml/h 5.0% H<sub>2</sub>SO<sub>4</sub> at 20° into a 200 mm  
long, 25 mm inside diameter vertical tower packed with activated charcoal  
(Supersorbon SW4, particle size 4 mm, bulk d. 0.4) for 240 hr, giving an  
effluent containing 0.045 mg/m<sup>3</sup> I.

L16 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Polyurethan elastomers having increased pot life  
AN 1967:38692 CAPLUS  
DN 66:38692  
TI Polyurethan elastomers having increased pot life  
PA Dainippon Ink and Chemicals, Inc.  
SO Brit., 6 pp.  
CODEN: BRXXAA  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	GB 1050275		19661207	GB	
				JP	19630305
	DE 1495502			DE	

AB Polyester elastomers prepared from  $\epsilon$ -caprolactone (I) are treated with an ion-exchange resin or similar material prior to treatment of the polyester with a diisocyanate and a diamine. For example, 684 g. unsubstituted I was polymerized by heating for 6 hrs. in N in the presence of 46.5 g.  $\text{CH}_2\text{OHCH}_2\text{OH}$  initiator and  $\text{BF}_3 \cdot \text{Et}_2\text{O}$  catalyst. After dissolving the resulting polymer in 800 g. PhMe, neutralizing by addition of 30 g. of 26%  $\text{NH}_4\text{OH}$ , and washing with  $\text{H}_2\text{O}$ , treatment was effected at room temperature by adding 100 g. of Diaion SA-100 (anion-exchange resin). The polymeric solution was passed through 100 g. of Dowex 50 (cation-exchange resin) followed by concentration under reduced pressure at  $100^\circ$  to obtain a light-yellow, waxlike polyester having an OH value 102.2, a carboxyl value 2.5, and m.p.  $52^\circ$ . To 210.8 g. of this polyester, 73 g. toluene diisocyanate (II) was added at  $80^\circ$ , the reaction being stopped when no further decrease in the **isocyanate** radical content of the reaction mixture could be observed. Then, 100 g. of the resulting polyester-polyurethan diisocyanate was subjected for 30 min. to a reduced-pressure defoaming operation at 3-5 mm. and  $90^\circ$ , after which 15 g. 3,3'-dichloro-4,4'-bisphenylenediamine was added at  $80^\circ$  and the mixture stirred. The mixture was cast between 2 sheets of glass and hardened for 5 hrs. at  $130^\circ$ . The pot life was 4 min. and 15 sec., the tensile strength 450 kg./cm.<sup>2</sup>, elongation 420%, tear strength 90 kg./cm., brittle temperature  $<70^\circ$ , Shore A hardness 92. If 0.25 g.  $\text{PCl}_3$  is added along with II in the above example, the pot life is extended to 10 min. and 50 sec. while the rest of the phys. consts. are unaffected. Instead of Diaion SA-100, an ion-exchange membrane, activated clay,  $\text{Al}_2\text{O}_3$ , silica gel, or **activated carbon** may be used. Instead of  $\text{PH}_3$ ,  $p\text{-MeC}_6\text{H}_4\text{SO}_2\text{Cl}$ ,  $\text{PBr}_3$ ,  $\text{POCl}_3$ ,  $\text{SOCl}_2$ , or  $\text{SO}_2\text{Cl}_2$  may be used.

L16 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
TI Polyurethan manufacture  
AN 1966:105433 CAPLUS  
DN 64:105433  
OREF 64:19928b-f  
TI Polyurethan manufacture  
IN Aitken, Roxburgh R.; Green, William

PA Imperial Chemical Industries Ltd.  
 SO 7 pp.  
 DT Patent  
 LA Unavailable  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 1025242		19660406	GB	19621102
AB	<p>Polyurethans which are relatively unaffected by high humidity and which are suitable for manufacture of foams having a high resistance to compression are prepared by treating an OH-containing block copolymer of ethylene and 1,2-propylene oxides, having an oxyethylene content of 0.1-7% by weight, with a polyisocyanate. The latter may be either a product obtained by treating tolylene diisocyanate with less than a stoichiometric equivalent of at least one polyol having a mol. weight <math>\leq 1000</math>, or alternatively a composition comprising a major proportion of a diarylmethane diisocyanate and from 5 to 50% by weight of a polyisocyanate with a functionality <math>&gt;2</math>. Suitable diarylmethane diisocyanates are diphenylmethane diisocyanate and phenyltolylmethane diisocyanate. A polyisocyanate with a functionality <math>&gt;2</math> may be directly added to the diarylmethane diisocyanate or such a compound may be prepared by treating the latter with a polyol or by partially polymerizing the latter or as by products of the manufacture of diarylmethane diisocyanate by phosgenation of diaryldiaminomethane. Thus, a block copolymer is obtained by first polymerizing propylene oxide to a mol. weight 4750 at 45-55 psig. at 125° in the presence of glycerol and KOH. Ethylene oxide (200 parts) is then added and the mixture is heated to 100-10° under the autogeneous pressure generated. The crude product is <b>purified</b> by heating and stirring at 20 mm. for 1 hr. followed by neutralization with adipic acid in the presence of Filtecel, <b>activated carbon</b>, and 2-(<math>\alpha</math>-methylcyclohexyl)-4,6-dimethylphenol. The product has an OH value of 33.3 mg. KOH/g., a water content of 0.06%, and an acid value of 0.11 mg. KOH/g., and contains 5% ethylene oxide residues. A polyisocyanate is prepared by treating 4.5 equivalent (based on combined OH and acid values of polyester) of 80:20 2,4- and 2,6-tolyene diisocyanate with a polyester of OH value 650 mg. KOH/g. and acid value <math>&lt;2</math> mg. KOH/g. obtained by condensing 8 moles of trimethylolpropane, 1 mole of pentaerythritol, and 4 moles adipic acid. The product contains 30% by weight of free <b>isocyanate</b> groups. Foams are obtained by treating the block copolymer with the <b>isocyanate</b>.</p>				

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	93.58	102.21
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-12.00	-12.00

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 STN INTERNATIONAL SESSION SUSPENDED AT 08:56:24 ON 15 MAR 2006